

Application No. 08/236,402

Claim 11 in Independent Form

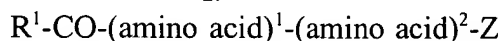
11. A complex formed by reacting a reagent comprising: a specific binding compound having a molecular weight of less than 10,000 daltons,

the compound being covalently linked to

a radiolabel complexing moiety

having a formula selected from the group consisting of:

I.

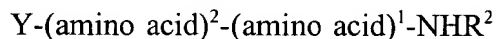


wherein (amino acid)¹ and (amino acid)² are each independently any primary α - or β -amino acid that does not contain a thiol group; Z is selected from the group consisting of cysteine, homocysteine, isocysteine, penicillamine, 2-mercaptoethylamine and 3-mercaptopropylamine; R¹ is lower (C¹-C⁴) alkyl or a covalent linkage to the compound;

wherein when Z is cysteine, homocysteine, isocysteine or penicillamine, Z comprises a carbonyl group covalently linked to a hydroxyl group, a NR³R⁴ group wherein R³ and R⁴ are each independently H or lower (C¹-C⁴) alkyl, an amino acid, or a peptide comprising 2 to 10 amino acids,

and

II.



wherein Y is selected from the group consisting of cysteine, homocysteine, isocysteine, penicillamine, 2-mercaptoacetate and 3-mercaptopropionate; (amino acid)¹ and (amino acid)² are each independently any primary α - or β -amino acid that does not contain a thiol group;

R² is selected from the group consisting of H, a lower (C¹-C⁴) alkyl, and a covalent linkage to the compound;

wherein when Y is cysteine, homocysteine, isocysteine or penicillamine, Y comprises an amino group covalently linked to -H, an amino acid, or a peptide comprising 2 to 10 amino acids; and

wherein the moiety is linked to the compound through R¹, R², a sidechain group of (amino acid)¹, a sidechain group of (amino acid)², an amino group of cysteine, homocysteine, isocysteine, or penicillamine, or a carboxyl group of cysteine, homocysteine, isocysteine or penicillamine.

with technetium 99m in the presence of a reducing agent.